A copy to August 1981 DPM 292

DAC 25-1837 (REV. 8-70)

HAZARDOUS MATERIALS DATA SHEET

(PLEASE COMPLETE APPLICABLE SECTIONS)

MSDS

JAN 15 1982

1. PRODUCT NAME, NUMBER, SYNONYM: RODINE #50
2. MANUFACTURER'S NAME: AMCHEM PRODUCTS, INC
3. MANUFACTURER'S ADDRESS: AMBLER, PENNA
4. PROCEDURE IN CASE OF BREAKAGE OR LEAKAGE:
5. TRANSPORTATION AND STORAGE REQUIREMENTS:
6. FIRST AID TREATMENT:
   - A. SKIN CONTACT:
   - B. EYE CONTACT:
   - C. INHALATION:
   - D. ANTIDOTE IN CASE OF SWALLOWING:
7. PHYSIOLOGICAL PROPERTIES:
   - A. ACUTE ORAL TOXICITY:
   - B. LOCAL EFFECTS UPON EYES:
   - C. LOCAL EFFECTS UPON SKIN:
   - D. ESTIMATE OF ACUTE HAZARD BY INHALATION (VOLATILE MATERIALS):
   - E. WARNING PROPERTIES (ODOR, IRRITATION TO EYES, NOSE OR THROAT):
   - F. ESTIMATED THRESHOLD LIMIT VALUE (IF NOT ON CURRENT LIST BY AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS):
8. CHEMICAL AND PHYSICAL PROPERTIES:
   - A. SPECIFIC GRAVITY (WATER = 1) B. VAPOR DENSITY (AIR =1)
   - C. VAPOR PRESSURE mm Hg AT 25° C. D. pH
   - E. CORROSIVE ACTION ON COMMON MATERIALS SUCH AS: ALUMINUM, MAGNESIUM, PLEXIGLAS, RUBBER, LACQUERS, ENAMELS, FABRICS:

F. DOES THE MATERIAL DECOMPOSE EN EXPOSED TO AIR? WATER? HEAT? STRONG IDIZERS? _____

G. FOR MIXTURES GIVE THE PERCENTAGE COMPOSITION OF INGREDIENTS:

	COMPOUND	PERCENT	
			formaldehyde
LIQUID CONCENTRATE	FORMALIN	39-46	"TLV" = 5ppm
	MURIATIC ACID (HCl)	20-25	TLV = 5 ppm
	ORTHO TOLUIDINE	15-20	TLV = 5ppm SKIN = 22 mg/m³

NOTE: GENERALIZATIONS SUCH AS PETROLEUM HYDROCARBONS, ALCOHOL, KETONES, CHLORINATED HYDROCARBONS, ETC., ARE NOT ADEQUATE FOR TOXICOLOGICAL EVALUATION. PROPER CHEMICAL NAMES MUST BE KNOWN.

H. DOES THE MATERIAL GENERATE HEAT THROUGH POLYMERIZATION OR CONDENSATION? _____

9. PRECAUTIONS FOR NORMAL CONDITIONS OF USE: _____

10. RECOMMENDED PROTECTIVE EQUIPMENT: _____

11. A. FLASHPOINT °F: CLOSED CUP _____ ; OPEN CUP _____ ; IF F.P. CHANGES DURING EVAPORATION GIVE DATA:

B. EXPLOSIVE LIMITS (% VOL. AIR): LOWER _____ ; UPPER _____

C. SUSCEPTIBILITY TO SPONTANEOUS HEATINGS: YES _____ ; NO _____

D. FIRE POINT °F _____ ; AUTO IGNITION TEMPERATURE °F _____

E. VAPOR DENSITY _____

F. WHAT PRODUCTS MIGHT BE FORMED IN THE EVENT OF FIRE OR ABNORMAL TEMPERATURES? _____

G. SUITABLE EXTINGUISHING AGENTS: _____

12. INFORMATION FURNISHED BY: Lester Ellenbecker

TITLE: Director of Research, Metal Working Chemicals Div.

COMPANY: Amchem Products, Inc.

ADDRESS: Ambler, Penna., 19002

DATE: 12/7/71

NOTE: INFORMATION IN REGARD TO A MATERIAL'S COMPOSITION WILL BE USED FOR THE PURPOSE OF COMPLYING WITH LOCAL, STATE AND FEDERAL ORDINANCES, LAWS AND CODES, AND REQUIREMENTS OF GOVERNMENTAL AGENCIES.

THE COMPLETED FORM SHOULD BE RETURNED TO PURCHASING, DOUGLAS AIRCRAFT DIVISION, LONG BEACH, CALIF. 90801.

A ester

TOXICOLOGICAL AND SAFE HANDLING INFORMATION
(For Use by Medical and Safety Personnel)

1. PRODUCT: Rodine Nos. 12W, 20, 23, 50, 51, 60, 67, 81, 82A, 92A, 500, XL1010, XL1050, XL1050 A.

2. MANUFACTURER: Amchem Products, Inc., Ambler, Pennsylvania

3. STORAGE REQUIREMENTS: Store in a dry area at temperatures between 40°F. and 120°F. Loosen bungs on metal containers to release any gases.

4. PROTECTIVE EQUIPMENT: The use of rubber gloves, aprons, face shields, goggles, etc., is recommended when adding Rodines to the acid baths.

5. CARE OF BREAKAGE OR LEAKAGE: Transfer contents to a clean, glass carboy. Clean, mild steel drums may be used for temporary storage. Discard broken container after first rinsing thoroughly with water.

6. FIRST AID:

   a. Skin Contact: Treat as for corrosive chemicals. Wash thoroughly with soap and water immediately after contact. Prolonged contact with Rodines, especially in hot, humid weather can cause dermatitis or chemical burns.

   b. Eye Contact: Flush with large amounts of water immediately after contact. Call a doctor.

   c. Inhalation: Prolonged inhalation of Rodine fumes or fog may cause injury to the mucous membranes and respiratory tract. Adequate exhaust systems, masks, respirators, etc., should be provided if conditions are such that fogs or fumes are formed.

   d. Antidote if Swallowed: Give an emetic, e.g., a paste made from powdered mustard and warm water, as soon as possible. The use of a demulcent or universal antidote is recommended until a physician can be obtained. The universal antidote consists of one heaping teaspoonful of the following composition in a small glass of warm water:

      2 parts pulverized charcoal
      1 part magnesium oxide
      1 part tannic acid.

7. PROPERTIES:

a. State: The described Rodine chemicals are liquids; their specific gravities are tabulated below:

Rodine	Specific Gravity (60°F.)	Rodine	Specific Gravity (60°F.)
12W	1.025	81	1.155
20	1.178	82A	1.200
23	1.050	92A	1.185
50	1.080	500	1.094
51	1.11	XL1010	1.100
60	1.060	XL1050	1.085
67	1.105	XL1050A	1.085

b. Description: The described Rodine chemicals are materials containing heterocyclic nitrogen bases (usually in the form of salts), surface active agents, and synergistics. They have a characteristic odor; however, the odor of the acid baths to which they are added will predominate.

c. Flammability: All of the described Rodines, except for Rodine No. 51 with a flash point of 131°F. and Rodine No. 67 with a flash point of 70°F., are nonflammable chemicals.

If subjected to high temperatures or fires, these Rodine chemicals would give off the same gases as any nitrogen containing chemical under the same conditions.

8. EXTINGUISHING AGENTS OTHER THAN WATER: The use of carbon dioxide, foam or vaporizing liquid extinguishers is recommended for Class A or Class B fires.

Rodine is a registered Trademark of Amchem Products, Inc., for acid-inhibiting chemicals.

DATE: January 1966 (rev.)